

```

<110> GeneMatrix Inc.; Kim, Nam-Keun
<120> Method for detecting base mutation
<130> 11281-014-999
<150> KR2002-0063832
<151> 2002-10-18
<150> KR2003-0061066
<151> 2003-09-02
<160> 33
<170> KopatentIn 1.71
<210> 1
<211> 69
<212> DNA
<213> Homo sapiens
<400> 1
gttcaacttg ataaagcaat aaaatgctat tcacagctgc atgaggctac accttttt 60
tgaatgcag 69

<210> 2
<211> 34
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer for 4th intron region of maspin gene

<400> 2
tcacttgata aagcaataaa aggatggcta ttca 34

<210> 3
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer for 4th intron region of maspin gene

<400> 3
cattcaaaaag aagggtgtag cctcatgc 28

<210> .4
<211> 68
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR Fragment

```

<400> 4		
tcacttata aagcaataaa aggatggcta ttcactagct gcatgaggct acacccttct	60	
tttgaatg	68	
<210> 5		
<211> 68		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Resulting PCR Fragment		
<400> 5		
cattcaaaaag aagggtgtag cctcatgcag ctagtgaata gccatccctt tattgcttta	60	
tcaagtga	68	
<210> 6		
<211> 73		
<212> DNA		
<213> Homo sapiens		
<400> 6		
ctggagttt atccttgcag gcttgatatg aagcttgaaa tttctccca aagagattta	60	
gttaacaggc aaa	73	
<210> 7		
<211> 34		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Forward primer for 4th intron region of maspin gene		
<400> 7		
gaggattatc cttgcaggct tggatgatat gaag	34	
<210> 8		
<211> 29		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Reverse primer for 4th intron region of maspin gene		
<400> 8		
gcctgttaac taaatctctt tggggagaa	29	
<210> 9		

```

<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR Fragment

<400> 9
gaggattatc cttgcaggct tggatgatat gaagcttga aatttctccc caaagagatt 60
tagttaacag gc 72

<210> 10
<211> 72
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR Fragment

<400> 10
gcctgttaac taaatctctt tggggagaaa tttcaaagct tcataatcatc caagcctgca 60
aggataatac tc 72

<210> 11
<211> 60
<212> DNA
<213> Hepatitis B virus

<400> 11
ttcccccact gtttggcttt cagttatatg gatgatgtgg tattggggc caagtctgta 60
60

<210> 12
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer for HBV

<400> 12
ttcccccact gtttggctgg atgtcagtta t 31

<210> 13
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer for HBV

```

<400> 13	tacagacttg gcccccaata ccacatgatc	30
<210> 14		
<211> 64		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Resulting PCR fragment		
<400> 14	ttcccccaact gttggctgg atgtcagtta tatggatcat gtggtattgg gggccaagtc	60
tgta		64
<210> 15		
<211> 64		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Resulting PCR fragment		
<400> 15	tacagacttg gcccccaata ccacatgatc catataactg acatccagcc aaacagtggg	60
ggaa		64
<210> 16		
<211> 244		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> 5'Noncoding region of HCV		
<400> 16	gcagaaaagcg tctagccatg gcgtagtat gagtgcgtg cagcctccag gaccccccct	60
cccgggagag ccatagtggt ctgcggaacc ggtgagtaca ccggaattgc caggacgacc		120
gggtccttcc ttggatcaac ccgcgtcaatg cctggagatt tgggcgtgcc cccgcaagac		180
tgctagccga gtagtgttgg gtcgcgaaag gccttgtggt actgcctgat agggtgcttg		240
cgag		244
<210> 17		
<211> 24		
<212> DNA		
<213> Artificial Sequence		

<220>
 <223> Forward primer of 5'NCR of HCV

<400> 17
 gcagaaagcg tctagccatg gcgt

24

<210> 18
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Reverse primer of 5'NCR of HCV

<400> 18
 ccctatcaagg cagtaccaca aggc

24

<210> 19
 <211> 226
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Resulting PCR fragment

<400> 19
 cgtctagcca tggcgtagt atgagtgtcg tgcagcctcc aggacccccc ctcccgggag

60

agccatagtg gtctgcggaa ccggtgagta cacggaaatt gccaggacga ccgggtcctt

120

tcttggatca acccgctcaa tgcctggaga tttggcgtg ccccgcaag actgctagcc

180

gagtagtgtt gggtcgcgaa aggccttgtg gtactgcctg ataggg

226

<210> 20
 <211> 32
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Forward primer

<400> 20
 cgtctagcca tggcgtagg gatgatgagt gt

32

<210> 21
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Reverse primer

<400> 21
ccctatcagg cagtaccaca aggc

24

<210> 22
<211> 230
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR fragment

<400> 22
cgtctagcca tggcgtagg gatgatgagt gtcgtgcagc ctccaggacc cccctcccg 60
ggagagccat agtggctctgc ggaaccgggt agtacaccgg aattgccagg acgaccgggt 120
cctttcttgg atcaacccgc tcaatgcctg gagatttggg cgtcccccg caagactgct 180
agccgagtag tgggggtcg cgaaaggcct tgtggtaactg cctgataggg 230

<210> 23
<211> 230
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR fragment

<400> 23
ccctatcagg cagtaccaca aggcctttcg cgacccaaca ctactcggtc agcagtcttgc 60
cgggggcacg cccaaatctc caggcattga gcgggttgat ccaagaaagg acccggtcg 120
cctggcaatt ccgggtgtact caccgggttcc gcagaccact atggctctcc cgggaggggg 180
ggtcctggag gctgcacgac actcatcatc cctaacgcca tggctagacg 230

<210> 24
<211> 133
<212> DNA
<213> Artificial Sequence

<220>
<223> Template DNA

<400> 24
gtggctcgca gaaaccggta gtacaccggta attgccagga cgaccgggtc ctttcttgg 60
tcaacccgct caatgcctgg agatttgggc gtgcccccgca aagactgcta gccgagtagr 120
gttgggttgc gaa 133

<210> 25

```

<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Forward primer

<400> 25
gtggtctgtc caaccggta gtacaccgga at 32

<210> 26
<211> 35
<212> DNA
<213> Artificial Sequence

<220>
<223> Reverse primer

<400> 26
ttcgcraccc aacrctactc caacggtccg gctag 35

<210> 27
<211> 142
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR fragment

<400> 27
gtggtctgtc caaccggta gtacaccgga attgccagga cgaccgggtc ctttcttgga 60
tcaacccgct caatgcctgg agatttgggc gtgccccgc aagactgcta gccggaccgt
tggagtagrg ttgggtrgct aa 120
142

<210> 28
<211> 142
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR fragment

<400> 28
ttcgcraccc aacrctactc caacggtccg gctagcagtc ttgcgggggc acgccccaaat 60
ctccaggcat tgagcgggtt gatccttcaa aggacccggc cgtcctggca attccgggtgt
actcaccggc tggacagacc ac 120
142

<210> 29
<211> 59

```

```

<212>      DNA
<213>      Artificial Sequence

<220>
<223>      Template DNA

<220>

<221>      modified_base
<222>      (4)
<223>      i

<400>      29
gacngggtcc tttcttggat caacccgctc aatgcctgga gatttggcgc tgcccccg      59

<210>      30
<211>      23
<212>      DNA
<213>      Artificial Sequence

<220>
<223>      Forward primer

<220>
<221>      modified_base
<222>      (4)
<223>      i

<400>      30
gacngggtcc tggatgtctt gga                                         23

<210>      31
<211>      22
<212>      DNA
<213>      Artificial Sequence

<220>
<223>      Reverse primer

<400>      31
gcgggggcac ggatgcccaa at                                         22

<210>      32
<211>      67
<212>      DNA
<213>      Artificial Sequence

<220>
<223>      Resulting PCR fragment

<220>
<221>      modified_base

```

<222> (4)
<223> i

<400> 32
gacngggtcc tggatgtctt gcatcaaccc gctcaatgcc tggagatttgcgcatccgtg 60
cccccgcc 67

<210> 33
<211> 67
<212> DNA
<213> Artificial Sequence

<220>
<223> Resulting PCR fragment

<220>
<221> modified_base
<222> (4)
<223> i

<400> 33
gcgggggcac gcatgcacaa atctccaggg attgagcggg ttgatccaag acatccagga 60
cccnngtc 67